

In the Claims:

Please amend claims 1, 3, 5-9, 27, 29, 31-35, 37 and 40; cancel claims 14-26; and add new claims 41-42, all as shown below. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application.

1. (Currently Amended) A method for accepting a request in order to generate a response, comprising:

mapping the request to a control tree factory;

generating a control tree from the factory based on the request wherein the control tree can include at least one control a plurality of controls, wherein each control of the plurality of controls represents a graphical element of a graphical user interface (GUI);

initializing the plurality of controls and allowing each control of the plurality of controls to at least one of specify events that each said control listens for and register events that each said control can raise;

associating at least one event handler with at least one control in the plurality of controls to handle an event raised by another control in the plurality of controls using a callback mechanism;

advancing the control tree through at least one lifecycle stage based on the request and updating the control tree; and

generating [[a]] the response based on the control tree that is updated, wherein the response can be used to render at least a portion of a graphical user interface (GUI); and

wherein the at least one control can represent a graphical element of the GUI; wherein the controls of the control tree intercommunicate by raising events in a raise events lifecycle stage; and wherein the raise events lifecycle stage occurs before a render lifecycle stage;

wherein a raise event method is called to raise events in the raise events lifecycle stage;

wherein an event mechanism allows controls to register for events that they will raise or listen for;

wherein when an event is raised, all controls in the control tree that have registered to receive it, handle the event; and

wherein at least some controls are associated with different portions of a displayed page such that an action at a first portion of a page associated with a first control of the control tree causes an event that is received by a second control of the control tree associated with a second portion of the page such that a second action occurs at the second portion of the page.

2. (Original) The method of claim 1 wherein the step of generating a control tree from the factory

comprises:

creating a metadata representation of a control tree; and
constructing the control tree based on the metadata representation.

3. (Currently Amended) The method of claim 1 wherein:

the request one of: [[an]] a hypertext transfer protocol request (HTTP), simple mail transfer protocol request, an instant messaging request, a request based on a standard protocol; and a request based on a proprietary protocol; and

the request originates from one of: a web browser, [[a]] an instant messaging window, and a process.

4. (Original) The method of claim 1, further comprising:

providing the response to a web browser.

5. (Currently Amended) The method of claim 1 wherein:

the control tree is driven through the at least one lifecycle stage by an interchangeable lifecycle component, wherein the interchangeable lifecycle driver isolates lifecycle driver implementation details from a container of the control tree and allows different lifecycle implementations to be interchanged.

6. (Currently Amended) The method of claim 1 wherein:

at least one of the at least one control plurality of controls has an interchangeable persistence mechanism.

7. (Currently Amended) The method of claim 1 wherein:

at least one of the at least one control plurality of controls can render itself according to a theme.

8. (Currently Amended) The method of claim 1 wherein:

one of the at least one of the plurality of controls can interact with another of the at least one of the plurality of controls.

9. (Currently Amended) The method of claim 1 wherein:

one of the at least one of the plurality of controls can advance through the at least one

lifecycle stage in parallel with another ~~of the at least one of the plurality of controls.~~

10. (Original) The method of claim 1 wherein:

the lifecycle stage is one of: init, load state, create child controls, load, raise events, pre-render, render, save state, unload and dispose; and
wherein the lifecycle stage is part of a dynamically configurable lifecycle.

11. (Original) The method of claim 1 wherein:

the response is one of: an hypertext transfer protocol (HTTP) response, a simple mail transfer protocol response, an instant messaging response, a response based on a standard protocol, and a response based on a proprietary protocol.

12. (Original) The method of claim 1 wherein:

controls can raise events and respond to events.

13. (Original) The method of claim 1 wherein:

the at least one control can be one of: Book, Page, Window, Menu, Layout, Portlet, Theme, Placeholder, Shell, LookAndFeel, Desktop, Body, Footer, Header, Head, Titlebar, ToggleButton, TreeView, TreeViewWithRadioButtons, TextBox, TextArea, Label, Button and Anchor.

14-26. (Canceled)

27. (Currently Amended) A machine readable medium having instructions stored thereon that when executed by a processor cause a system to:

map [[a]] the request to a control tree factory;

generate a control tree from the factory based on the request wherein the control tree can include ~~at least one control~~ a plurality of controls, wherein each control of the plurality of controls represents a graphical element of a graphical user interface (GUI);

initialize the plurality of controls and allowing each control of the plurality of controls to at least one of specify events that each said control listens for and register events that each said control can raise;

associate at least one event handler with at least one control in the plurality of controls to handle an event raised by another control in the plurality of controls using a callback mechanism;

advance the control tree through at least one lifecycle stage based on the request and update the control tree; and

generate [[a]] the response based on the control tree that is updated, wherein the response can be used to render at least a portion of a graphical user interface (GUI); and

~~wherein the at least one control can represent a graphical element of the GUI; wherein the controls of the control tree intercommunicate by raising events in a raise events lifecycle stage; and wherein the raise events lifecycle stage occurs before a render lifecycle stage;~~

~~wherein a raise event method is called to raise events in the raise events lifecycle stage;~~

~~wherein an event mechanism allows controls to register for events that they will raise or listen for;~~

~~wherein when an event is raised, all controls in the control tree that have registered to receive it, handle the event; and~~

~~wherein at least some controls are associated with different portions of a displayed page such that an action at a first portion of a page associated with a first control of the control tree causes an event that is received by a second control of the control tree associated with a second portion of the page such that a second action occurs at the second portion of the page.~~

28. (Original) The machine readable medium of claim 27 wherein the step of generating a control tree from the factory comprises:

creating a metadata representation of a control tree; and

constructing the control tree based on the metadata representation.

29. (Currently Amended) The machine readable medium of claim 27 wherein:

the request one of: [[an]] a hypertext transfer protocol request (HTTP), simple mail transfer protocol request, an instant messaging request, a request based on a standard protocol; and a request based on a proprietary protocol; and

the request originates from one of: a web browser, [[a]] an instant messaging window, and a process.

30. (Original) The machine readable medium of claim 27, further comprising:

providing the response to a web browser.

31. (Currently Amended) The machine readable medium of claim 27 wherein:

the control tree is driven through the at least one lifecycle stage by an interchangeable

lifecycle component, wherein the interchangeable lifecycle driver isolates lifecycle driver implementation details from a container of the control tree and allows different lifecycle implementations to be interchanged.

32. (Currently Amended) The machine readable medium of claim 27 wherein:
~~at least one of the at least one control plurality of controls~~ has an interchangeable persistence mechanism.

33. (Currently Amended) The machine readable medium of claim 27 wherein:
~~at least one of the at least one control plurality of controls~~ can render itself according to a theme.

34. (Currently Amended) The machine readable medium of claim 27 wherein:
~~one of the~~ ~~at least one of the~~ ~~plurality of controls~~ can interact with another ~~of the~~ ~~at least one of the~~ ~~plurality of controls~~.

35. (Currently Amended) The machine readable medium of claim 27 wherein:
~~one of the~~ ~~at least one of the~~ ~~plurality of controls~~ can advance through the at least one lifecycle stage in parallel with another ~~of the~~ ~~at least one of the~~ ~~plurality of controls~~.

36. (Original) The machine readable medium of claim 27 wherein:
the lifecycle stage is one of: init, load state, create child controls, load, raise events, pre-render, render, save state, unload and dispose; and
wherein the lifecycle stage is part of a dynamically configurable lifecycle.

37. (Currently Amended) The machine readable medium of claim 27 wherein:
the response is one of: [[an]] ~~a~~ hypertext transfer protocol (HTTP) response, a simple mail transfer protocol response, an instant messaging response, a response based on a standard protocol, and a response based on a proprietary protocol.

38. (Original) The machine readable medium of claim 27 wherein:
controls can raise events and respond to events.

39. (Original) The machine readable medium of claim 27 wherein:

the at least one control can be one of: Book, Page, Window, Menu, Layout, Portlet, Theme, Placeholder, Shell, LookAndFeel, Desktop, Body, Footer, Header, Head, Titlebar, ToggleButton, TreeView, TreeViewWithRadioButtons., TextBox, TextArea, Label, Button and Anchor.

40. (Currently Amended) A computer-readable storage medium containing code, comprising:

- a code segment including instructions to map [[a]] the request to a control tree factory;
- a code segment including instructions to generate a control tree from the factory based on the request wherein the control tree can include at least one control a plurality of controls, wherein each control of the plurality of controls represents a graphical element of a graphical user interface (GUI);
- a code segment including instructions to initialize the plurality of controls and allowing each control of the plurality of controls to at least one of specify events that each said control listens for and register events that v can raise;
- a code segment including instructions to associate at least one event handler with at least one control in the plurality of controls to handle an event raised by another control in the plurality of controls using a callback mechanism;
- a code segment including instructions to advance the control tree through at least one lifecycle stage based on the request and update the control tree; and
- a code segment including instructions to generate [[a]] the response based on the control tree that is updated, wherein the response can be used to render at least a portion of a graphical user interface (GUI); and
- wherein the at least one control can represent a graphical element of the GUI; wherein the controls of the control tree intercommunicate by raising events in a raise events lifecycle stage; and wherein the raise events lifecycle stage occurs before a render lifecycle stage;
- wherein a raise event method is called to raise events in the raise events lifecycle stage;
- wherein an event mechanism allows controls to register for events that they will raise or listen for;
- wherein when an event is raised, all controls in the control tree that have registered to receive it, handle the event; and
- wherein at least some controls are associated with different portions of a displayed page such that an action at a first portion of a page associated with a first control of the control tree causes an event that is received by a second control of the control tree associated with a second portion of the page such that a second action occurs at the second portion of the page.

41. (New) The method of claim 1, further comprises:

creating one or more new control in the control tree by the event handler to handle a event raised by another control in the control tree that requires rendering of the one or more new control.

42. (New) The method of claim 1, wherein:

the control tree factory is a streaming control tree factory that creates a control tree from an XML Stream.